

REMARKS

Claims 1-17 are currently pending in connection with the present application.

Claims 1, 12 and 15 are independent claims. Claim 1 is amended for clarification and to be consistent with independent claims 12 and 15. Reconsideration and allowance are respectfully requested in view of the following remarks.

Applicants acknowledge and thank the Examiner for indicating that claim 17 contains allowable subject matter and would be allowed if rewritten in independent form including all the limitations of the base claim and any intervening claims.

First, Applicants wish to discuss the Examiner's "Response to Argument" detailed on page 2 of the current office action. Applicants respectfully submit that Applicants inadvertently omitted "at least **'one of'**" in their arguments presented in the response dated October 9, 2007, page 7. In view of this omission, Applicants completely understand the Examiner's response to the arguments. However, Applicants' previous arguments as to Bai et al. apply even in view of the omission (see below).

PRIOR ART REJECTIONS

35 U.S.C. §103(a) Bai/Cady Rejection

Claims 1-4, 7 and 9-16 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Bai et al. (U.S. Patent No. 6,326,700) in view of Cady et al. (U.S. Patent No. 6,576,992). Applicant respectfully traverses this rejection.

The amended independent claims recite, e.g. "first wirings connected to the terminal pad and providing electrical paths coupling the semiconductor chip and the terminal pads . . . the first wirings formed on one of the first and the second surface of the substrate," and "the second wirings connecting the terminal pads to the connecting pads. . . the second wirings being formed on the second surface of the substrate" (claim 1).

In response to the Examiner's current office action, Applicants submit that even if Bai et al. teaches a first wiring 22 and a second wiring 221, as alleged by the Examiner, Bai et al. also teaches that: (1) the first wiring 22 is located on a die 20 **not on one of the first or the second surface of the substrate 21** as recited in the independent claims; and (2) the second wiring 211 is located on a substrate 21, but the second wiring 211 **does not connect the terminal pads to the connecting pads** as recited in the independent claims.

Furthermore, Applicants respectfully submit that element 211, which according to Bai et al. includes both terminal pads and connecting pads is actually a single element 211, not three distinct elements (211, 211a, and 211b) having the same functions as the claimed wiring pattern, as argued by the Examiner. For example, 211 is a single element described by Bai et al., including connecting traces formed from a copper foil. Bai et al. then identifies that 211 may have two ends: a terminal end, which includes ball pad 211a and is used to couple gold wire 22 electrically to the semiconductor die 20 (column 4, lines 33 to 37); and an initial end, including bond pad 211b (column 4, line 63 to column 5, line 1) used to couple the substrate 21 to solder ball 24. However, 211a and 211b are still part of single element 211 and therefore are distinct from the claimed invention where there are two distinct wirings forming the wiring pattern.

In view of the above, the identified elements in Bai et al. do meet the claim limitations because the wiring pattern, (which must include both the first and second wirings 22, 221 (as identified by the Examiner)) cannot be on **one of the first and the second surface of the substrate**, as Bai et al. clearly teaches that the second wiring 221 is on **a surface** of the substrate, and the first wiring 22 is on **a surface of the die 20**.

In addition, Cady et al. fails to cure the deficiency of Bai et al. Accordingly, independent claims 1, 12 and 15 are patentable over Bai et al. and Cady et al. Dependent

claims 2-4, 7, 9-11, 13, 14 and 16 are also patentable for respectively depending on an allowable base claim.

35 U.S.C. §103 Bai/Cady/Taniguchi Rejection

Claims 5 and 6 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Bai et al. in view of Cady et al. in further view of Taniguchi et al. (U.S. Patent 6,388,333). Applicants respectfully traverse this rejection.

As remarked above, a combination of Bai et al. and Cady et al. fail to teach each and every feature of claim 1. In addition, Taniguchi et al. fails to cure the deficiencies of Bai et al. and Cady et al. Accordingly, claims 5 and 6 are patentable for depending on an allowable base claim.

35 U.S.C. §103 Bai/Cady/Takashima Rejection

Claim 8 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Bai et al. in view of Cady et al. in further view of Takashima et al. (U.S. Patent 6,160,313). Applicants respectfully traverse this rejection.

As remarked above, a combination of Bai et al. and Cady et al. fail to teach each and every feature of claim 1. In addition, Takashima et al. fails to cure the deficiencies of Bai et al. and Cady et al. Accordingly, claim 8 are patentable for depending on an allowable base claim.

CONCLUSION

Accordingly, in view of the above amendments and remarks, reconsideration of the objections and rejections and allowance of each of claims 1-17 in connection with the present application is earnestly solicited.

Pursuant to 37 C.F.R. §§ 1.17 and 1.136(a), Applicant hereby petitions for a one (1) month extension of time for filing a reply to the outstanding Office Action and submit the required \$120.00 extension fee herewith.

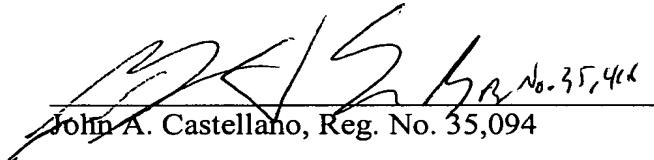
Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact John A. Castellano at the telephone number of the undersigned below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

HARNESS, DICKEY, & PIERCE, P.L.C.

By


John A. Castellano, Reg. No. 35,094

P.O. Box 8910
Reston, Virginia 20195
(703) 668-8000

JAC/JES:psy